



**EXHIBIT A:
AMENDMENTS MADE TO PENDING CLAIMS
U.S. PATENT APPLICATION SERIAL NO. 09/493,353
(ATTORNEY DOCKET NO. 2094/1E286-US1)**

SUBMITTED PURSUANT TO 37 C.F.R. § 1.121(c)(1)(ii)

1. (Twice Amended) A method for detecting the presence of Hepatitis C Virus

(HCV) RNA in a biological sample, said method comprising:

- (A) performing a reverse transcription reaction using, as a template, RNA derived from said sample to produce HCV-specific reverse transcription products;
- (B) amplifying said reverse-transcription products using one or more pairs of oligonucleotide primers specific for HCV to produce HCV-specific amplification products,

wherein said pairs are selected from the group consisting of:

- (a) forward primer 5'-CAGAAAGCGTCTAGCCATGGCGTTAGTA-3' (C69F28) <SEQ ID NO. 1> and reverse primer 5'-CGGTTCCGCAGAGACCACTATGGCTCTC-3' (C133R26) <SEQ ID NO. 4>; and
- (b) forward primer 5'-GGGAGAGCCATAGTGGTCTGCGGAA-3' (C131F25) <SEQ ID NO. 2> and reverse primer 5'-CGGGGCACTCGCAAGCACCTATCA-3' (C294R25) <SEQ ID NO. 7>; and

[(c) forward primer 5'-GTGGTCTGCGGAACCGGTGAGTACAC-[3] 3'

(C143F26) <SEQ ID NO. 3> and a reverse primer selected from the group consisting of

(i) 5'-GCAAGCACCTATCAGGCAGTACCACA-3' (C282R27)

<SEQ ID NO. 5>,

(ii) 5'-CACTCGCAAGCACCTATCAGGCAGTA-3' (C287R27)

<SEQ ID NO. 6>; and]

(C) detecting said amplification products, wherein detection of said amplification products indicates the presence of HCV RNA in said sample.

9. (Twice Amended) A method for amplifying Hepatitis C Virus (HCV) DNA, which method comprises performing a polymerase chain reaction on a DNA sample containing HCV DNA using one or more pairs of oligonucleotide primers specific for HCV to produce HCV-specific amplification products, wherein said pairs are selected from the group consisting of:

(a) forward primer 5'-CAGAAAGCGTCTAGCCATGGCGTTAGTA-3'

(C69F28) <SEQ ID NO. 1> and reverse primer

5'-CGGTTCCGCAGACCACTATGGCTCTC-3' (C133R26) <SEQ ID NO. 4>; and

(b) forward primer 5'-GGGAGAGCCATAGTGGTCTGCGGAA-3'

(C131F25) <SEQ ID NO. 2> and reverse primer

5'-CGGGGCACTCGCAAGCACCCCTATCA-3' (C294R25) <SEQ ID NO. 7>]; and

(c) forward primer 5'-GTGGTCTGCGGAACCGGTGAGTACAC-3 (C143F26) <SEQ ID NO. 3> and a reverse primer selected from the group consisting of

- (i) 5'-GCAAGCACCCCTATCAGGCAGTACCACA-3' (C282R27) <SEQ ID NO. 5>,
- (ii) 5'-CACTCGCAAGCACCCCTATCAGGCAGTA-3' (C287R27) <SEQ ID NO. 6>].

27. (Twice Amended) A method for detecting the presence of Hepatitis C Virus (HCV) RNA in a biological sample, said method comprising:

- (A) performing a reverse transcription reaction using as a template RNA derived from said sample to produce HCV-specific reverse transcription products;
 - (B) amplifying said reverse-transcription products using one or more pairs of 5' NCR oligonucleotide primers specific for HCV and one or more pairs of 3' NCR oligonucleotide primers to produce HCV-specific amplification products,
- wherein said 5' NCR primer pairs are selected from the group consisting

of:

- (a) forward primer 5'-CAGAAAGCGTCTAGCCATGGCGTTAGTA-3' (C69F28) <SEQ ID NO. 1> and reverse primer 5'-CGGTTCCGCAGACCACTATGGCTCTC-3' (C133R26) <SEQ ID NO. 4>; and
- (b) forward primer 5'-GGGAGAGCCATAGTGGTCTGCGGAA-3' (C131F25) <SEQ ID NO. 2> and reverse primer 5'-CGGGGCACTCGCAAGCACCCCTATCA-3' (C294R25) <SEQ ID NO. 7>; and
- [(c) forward primer 5'-GTGGTCTGCGGAACCGGTGAGTACAC-3' (C143F26) <SEQ ID NO.3> and a reverse primer selected from the group consisting of
- (i) 5'-GCAAGCACCCCTATCAGGCAGTACCACA-3' (C282R27) <SEQ ID NO. 5>,
- (ii) 5'-CACTCGCAAGCACCCCTATCAGGCAGTA-3' (C287R27) <SEQ ID NO. 6>; and]

wherein each of said pairs of 3' NCR oligonucleotide primers comprises a forward primer consisting of the oligonucleotide 5'-GGTGGCTCCATCTTAGCCCTAGTCACG-3' (1F27) <SEQ ID NO. 8> and a reverse primer consisting of the oligonucleotide 5'-AGGCCAGTATCAGCACTCTCTGCAGTC-[3] 3' (57R27) <SEQ ID NO. 9>; and

- (C) detecting said amplification products, wherein detection of said amplification products indicates the presence of HCV RNA in said sample.

35. (Twice Amended) A method for amplifying Hepatitis C Virus (HCV) DNA, which method comprises performing a polymerase chain reaction on a DNA sample containing HCV DNA using one or more pairs of 5' NCR oligonucleotide primers specific for HCV and one or more pairs of 3' NCR oligonucleotide primers to produce HCV-specific amplification products, wherein said 5' NCR primer pairs are selected from the group consisting of:

- (a) forward primer 5'-CAGAAAGCGTCTAGCCATGGCGTTAGTA-3' (C69F28) <SEQ ID NO. 1> and reverse primer 5'-CGGTTCCGCAGACCACTATGGCTCTC-3' (C133R26) <SEQ ID NO. 4>; and
- (b) forward primer 5'-GGGAGAGCCATAGTGGTCTGCGGAA-3' (C131F25) <SEQ ID NO. 2> and reverse primer 5'-CGGGGCACTCGCAAGCACCCCTATCA-3' (C294R25) <SEQ ID NO. 7>; and
- [(c) forward primer 5'-GTGGTCTGCGGAACCGGTGAGTACAC-3' (C143F26) <SEQ ID NO. 3> and a reverse primer selected from the group consisting of

- (i) 5'-GCAAGCACCTATCAGGCAGTACCACA-3' (C282R27)
<SEQ ID NO. 5>,
- (ii) 5'-CACTCGCAAGCACCTATCAGGCAGTA-3' (C287R27)
<SEQ ID NO. 6>; and]

wherein each of said pairs of 3' NCR oligonucleotide primers comprises a forward primer consisting of the oligonucleotide 5'-GGTGGCTCCATCTTAGCCCTAGTCACG-3' (1F27) <SEQ ID NO. 8> and a reverse primer consisting of the oligonucleotide 5'-AGGCCAGTATCAGCACTCTCTGCAGTC-3' (57R27) <SEQ ID NO. 9>.

40. (Twice Amended) An oligonucleotide selected from the group consisting of:
- 5'-CAGAAAGCGTCTAGCCATGGCGTTAGTA-3' (C69f28) <SEQ ID NO. 1>;
 - 5'-GGGAGAGCCATAGTGGTCTGCGGAA-3' (C131F25) <SEQ ID NO. 2>;
 - [5'-GTGGTCTGCGGAACCGGTGAGTACAC-3 (C143F26) <SEQ ID NO. 3>;]
 - 5'-CGGTTCCGCAGACCACTATGGCTCTC-3 (C133R26) <SEQ ID NO. 4>;
 - [5'-CACTCGCAAGCACCTATCAGGCAGTA-3' (C287R27) <SEQ ID NO. 6>;]
 - 5'-CGGGGCACTCGCAAGCACCTATCA-3' (C294R25) <SEQ ID NO. 7>;
 - 5'-GGTGGCTCCATCTTAGCCCTAGTCACG-3' (1F27) <SEQ ID NO. 8>;
 - 5'-AGGCCAGTATCAGCACTCTCTGCAGTC-3 (57R27) <SEQ ID NO. 9>;
 - 5'-GGGTCCTGGAGGCTGCACGACACTCAT-3' (C96-22-PRB) <SEQ ID NO. 11>;

5'-CCTTTCGCGACCCAACACTACTCGGCT-3' (C252-27-PRB) <SEQ ID NO. 12>;

5'-TTTCGCGACCCAACACTACTCGGCT-3' (C252-25-PRB) <SEQ ID NO. 13>;

5'-GCGGCTCACGGACCTTTCACAGCTA-3' (30PRB25) <SEQ ID NO. 14>; and

5'-ATGCGGCTCACGGACCTTTCACAGC-3' (32PRB25) <SEQ ID NO. 15>.

41. (Twice Amended) An HCV-specific amplification primer oligonucleotide selected from the group consisting of:

5'-CAGAAAGCGTCTAGCCATGGCGTTAGTA-3' (C69F28) <SEQ ID NO. 1>;

5'-GGGAGAGCCATAGTGGTCTGCGGAA-3' (C131F25) <SEQ ID NO. 2>;

[5'-GTGGTCTGCGGAACCGGTGAGTACAC-3' (C143F26) <SEQ ID NO. 3>;]

5'-CGGTTCCGCAGACCACTATGGCTCTC-3' (C133R26) <SEQ ID NO. 4>;

[5'-CACTCGCAAGCACCCCTATCAGGCAGTA-3' (C287R27) <SEQ ID NO. 6>;]

5'-CGGGGCACTCGCAAGCACCCCTATCA-3' (C294R25) <SEQ ID NO. 7>;

5'-GGTGGCTCCATCTTAGCCCTAGTCACG-3' (1F27) <SEQ ID NO. 8>; and

5'-AGGCCAGTATCAGCACTCTCTGCAGTC-3' (57R27) <SEQ ID NO. 9>.

43. A kit for [amplying] amplifying HCV DNA derived from HCV RNA, said kit comprising one or more pairs of 5' NCR oligonucleotide primers, wherein said 5' NCR primer pairs are selected from the group consisting of:

- (a) forward primer 5'-CAGAAAGCGTCTAGCCATGGCGTTAGTA-3'
(C69F28) <SEQ ID NO. 1> and reverse primer
5'-CGGTTCCGCAGACCACTATGGCTCTC-3' (C133R26) <SEQ ID
NO. 4>; and
- (b) forward primer 5'-GGGAGAGCCATAGTGGTCTGCGGAA-3'
(C131F25) <SEQ ID NO. 2> and reverse primer
5'-CGGGGCACTCGCAAGCACCCCTATCA-3' (C294R25) <SEQ ID
NO. 7>; and
- (c) forward primer 5'-GTGGTCTGCGGAACCGGTGAGTACAC-3
(C143F26) <SEQ ID NO. 3> and a reverse primer selected from
the group consisting of
 - (i) 5'-GCAAGCACCCCTATCAGGCAGTACCACA-3' (C282R27)
<SEQ ID NO. 5>,
 - (ii) 5'-CACTCGAAGCACCCCTATCAGGCAGTA-3' (C287R27)
<SEQ ID NO. 6>].

54. (Twice Amended) A kit for detecting the presence of HCV DNA, said kit comprising one or more pairs of 5' NCR oligonucleotide primers, wherein said 5' NCR primer pairs are selected from the group consisting of:

- (a) forward primer 5'-CAGAAAGCGTCTAGCCATGGCGTTAGTA-3'
(C69F28) <SEQ ID NO. 1> and reverse primer

5'-CGGTTCCGCAGACCACTATGGCTCTC-3' (C133R26) <SEQ ID NO. 4>; and

- (b) forward primer 5'-GGGAGAGCCATAGTGGTCTGCGGAA-3' (C131F25) <SEQ ID NO. 2> and reverse primer 5'-CGGGGCACTCGCAAGCACCCCTATCA-3' (C294R25) <SEQ ID NO. 7>; and
- (c) forward primer 5'-GTGGTCTGCGGAACCGGTGAGTACAC-[3] 3' (C143F26) <SEQ ID NO. 3> and a reverse primer selected from the group consisting of
- (i) 5'-GCAAGCACCCCTATCAGGCAGTACCACA-3' (C282R27) <SEQ ID NO. 5>,
 - (ii) 5'-CACTCGCAAGCACCCCTATCAGGCAGTA-3' (C287R27) <SEQ ID NO. 6>].